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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,582	03/17/2004	Chiyoshi Sasaki	KAW-0049	6139

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EXAMINER

PAPE, ZACHARY

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,582

Applicant(s)

SASAKI, CHIYOSHI



Examiner

Zachary M. Pape

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Restriction/Election

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, 16-18, drawn to a method of manufacturing, classified in class 29, subclass 890.03.
 - II. Claims 8-15, drawn to a heat sink apparatus, classified in class 361, subclass 704.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as making the metal plate and the fins in a single step rather than preparing a plate and then inserting the fins into the slits of the plate.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Soonja Bae on 2/15/2006 a provisional election was made without traverse to prosecute the invention of II, claims 8-15. Affirmation of this election must be made by applicant in replying to this Office action.

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Claims 1-7, 16-18 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

2. Claims 8, 10-11, and 14 are objected to because of the following informalities:

With respect to claim 8, "having a heat receiving portion and a heat dissipating portion" is incorrect since the applicant has already defined, "a heat dissipating portion". It appears that it should be changed to read, "having a heat receiving portion and the heat receiving portion".

With respect to claim 10, the claim recites, "and each of said slits spreads toward respective one end portions" which appears to be incorrect. It appears it should be changed to read, "and each of said slits spreads toward respective one end portion". Additionally the examiner notes that the end portions are not well defined. For the purposes of examination, the examiner has assumed that the applicant intends for the end portions to be of the metal shield plate (7). Therefore for clarity the examiner respectfully requests that the applicant further define what the end portion is a part of.

Similarly, claim 11 recites, "toward respective both end portions", where "end portion" is not well defined. For the purposes of examination, the examiner has assumed that the applicant intends for the end portions to be of the metal shield plate (7). Therefore for clarity the examiner respectfully requests that the applicant further define what the end portion is a part of.

With respect to claim 14, "in such manner" is incorrect. It appears that it should be changed to read, "in such a manner".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (US 6,357,514) in view of Zeighami et al. (US 2003/0183371).

With respect to claim 8, Sasaki et al. teaches a heat sink comprising: a heat dissipating portion (21) comprising a plurality of metal fins each having a heat receiving portion (22) and a heat dissipating portion having elasticity, a metal plate (1) having a plurality of slits (12) into which said respective heat dissipating portions are inserted and press-connected thereto with use of said elasticity; and a joining portion (3) to join said metal plate and said heat dissipating portions which are inserted into said respective slits and fixed thereto. Sasaki et al. fails to teach a fin fixing member to transfix said plurality of metal fins. Zeighami et al. teaches a plurality of heat sink fins (502) transfixed by a fin fixing member (500). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Zeighami et al. with that of Sasaki et al. to facilitate better and more even cooling of the fins.

With respect to claim 9, Sasaki et al. teaches a heat sink comprising: a heat dissipating portion comprising a plurality of metal fins (21) each having a heat receiving portion (22) and a heat dissipating portion (21) having elasticity (Inherent in any metal); a metal shield plate (1) having a plurality of slits (12) including curved portion (The slits are rectangular and thus have curves) into which said respective heat dissipating portions are inserted and press-connected thereto with use of said elasticity (As illustrated in Fig 3), and a joining portion (3) to join said metal shield plate and said heat dissipating portions which are inserted into said respective slits and fixed thereto. Sasaki et al. fails to teach a fin fixing member to transfix said plurality of metal fins. Zeighami et al. teaches a plurality of heat sink fins (502) transfixed by a fin fixing member (500). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Zeighami et al. with that of Sasaki et al. to facilitate better and more even cooling of the fins.

With respect to claim 10, Sasaki et al. further teaches that each of said slits has a substantially same width corresponding to a thickness of said heat dissipating portion across the metal plate, and each of said slits spreads toward respective one end portions in a longitudinal direction with remaining portions paralleled each other (As illustrated in Fig 4).

With respect to claim 11, Sasaki et al. further teaches that each of said slits has a substantially same width corresponding to a thickness of said heat dissipating portion across the metal plate, and each of said slits spreads toward respective both end

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portions in a longitudinal direction with center portions paralleled each other (As illustrated in Fig 4).

With respect to claim 12, Sasaki et al. further teaches that each of said slits has a substantially same width corresponding to a thickness of said heat dissipating portion across the metal plate, and each of said slits is parallel each other in a longitudinal direction (As illustrated in Fig 4).

With respect to claim 13, Sasaki et al. further teaches that each of said heat receiving portion and said heat dissipating portion of said fin comprises a square flat plate portion (As illustrated in Fig 4).

With respect to claim 14, Sasaki et al. further teaches that the plurality of fins are placed in parallel in such manner that respective heat receiving portions (22) of said fins form a single heat receiving face (That which is facing the joining portion (3)) as a whole.

With respect to claim 15, Zeighami et al. further teaches that the fin fixing member (500) comprises a heat pipe.

Conclusion

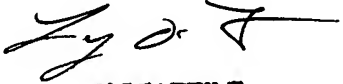
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP


LYNN FEILD
SUPERVISORY PATENT EXAMINER